Islam dan Peradaban Umat

Bidang Politik Sosial Ekonomi Pendidikan dan Teknologi

Editor :
Dr Moordiningsih, M.Si, Psi.
Gatiningsih, SIP.
Maria Husnun Nisa, S.Sos., M.A.
Ken Retno Yuniwati, SIP.
Esti Handayani, A.Md.

Penerbit :
Universitas Muhammadiyah Surakarta
Jl. A Yani Tromol Pos I Pabelan Surakarta 57102
2013

SURAT PENGALIHAN
PUBLIKASI

Nomor :

Yang bertanda tangan di bawah ini:

Nama : Dr. Moordiningsih, M.Si., P.si

Jabatan : Ketua Panitia Seminar Milad UMS ke 55

Menyatakan menyetujui pengalihan hak unggah publikasi kepada Lembaga Pengembangan Publikasi Ilmiah Universitas Muhammadiyah Surakarta atas artikel berjudul **"Falls Clinic : Falls Prevention Policy for Older People in Indonesia"** yang ditulis oleh Yulisna Mutia Sari, SSt.FT., MSc(GRS), NIDN: 0621078801, Dosen Program Studi Fisioterapi Fakultas Ilmu Kesehatan, Universitas Muhammadiyah Surakarta dalam acara "Seminar dan Traning Kepemimpinan "Peran Islam dalam Membangun Peradaban Umat : Bidang Politik Sosial, Ekonomi, Pendidikan dan Teknologi" yang diselenggarakan oleh Universitas Muhammadiyah Surakarta pada 24 – 25 Oktober 2013.

Surakarta, 25 Maret 2015

Ketua Panitia

Dr. Moordiningsih, M.Si.,PSi

KERJA KERAS SEBAGAI TOLAK UKUR KESUKSESAN BANGSA : Tinjauan Psikologi Islam dan Indigenous
Riza Mahmud.....672

SITUASI PSIKOLOGIS KELUARGA DALAM MEMPENGARUHI RELIGIUSITAS ANAK: Tinjauan Psikologi Islam Dan Indigenous
Sriyatun.....679

PENINGKATAN PENGETAHUAN DAN MOTIVASI TENTANG DETEKSI DINI KANKER SERVIKS SETELAH DIBERIKAN PENDIDIKAN KESEHATAN
Sulastri, SKp, MKes.....688

HUBUNGAN *CARDIOVASCULAR LOAD* PEMBATIK TULIS DAN *MYOFASCIAL TRIGGER POINT SYNDROME*
Suryo Saputra Perdana[1], Isnaini Herawati.....704

SIKAP KERJA DAN KEJADIAN MYOFASCIAL TRIGGER POINTS DI KAMPUNG BATIK LAWEYAN
Taufik Eko Susilo, Wahyuni.....719

KINESIO TAPING DAN LATIHAN *CORE STABILITY* TERBUKTI MAMPU MENURUNKAN NYERI PUNGGUNG BAWAH
Suryo Nugroho dan Totok Budi Santoso.....733

PENDAMPINGAN UNTUK MENINGKATKAN KETERAMPILAN ORANG TUA DALAM MENANGANI CEREBRAL PALSY
Abdurrachman[1], Umi Budi Rahayu[2].....749

FALLS CLINIC : FALLS PREVENTION POLICY FOR OLDER PEOPLE IN INDONESIA
Yulisna Mutia Sari, SSt.FT., MSc(GRS)[1] dan Ass. Prof. Victoria Traynor[2].....751

FALLS CLINIC : FALLS PREVENTION POLICY FOR OLDER PEOPLE IN INDONESIA
Yulisna Mutia Sari, SSt.FT., MSc(GRS)[1] dan Ass. Prof. Victoria Traynor[2].....776

PARKIR DAN PEDESTRIAN DI DEPAN KAMPUS UMS SERTA WACANA KEISLAMAN
Indrawati.....790

A GENETIC ALGORITHM APPROACH FOR OPTIMAL PARTITION OF NONLINEAR CURVES
Agus Ulinuha.....805

PENGEMBANGAN APLIKASI ANDROID UNTUK PENILAIAN PERKEMBANGAN BAHASA ANAK
Endah Sudarmilah[1], Irma Yuliana[2], Tindyo Prasetyo[3], Andi Suprianto[3].....821

Sertifikat

Diberikan kepada :

Yulisna Mutia Sari, SSt.FT., MSc (GRS)

Atas peran sertanya sebagai

PEMAKALAH

Seminar dan Training Kepemimpinan

Peran Islam Dalam Membangun Peradaban Umat:
Bidang Politik, Sosial, Ekonomi, Pendidikan & Teknologi.

Dalam Rangka Milad ke 55 Universitas Muhammadiyah Surakarta
Di Auditorium Muh. Djazman UMS | 24 - 25 Oktober 2013

Ketua Panitia,

Dr. Moordiningsih, M.Si, Psi.

Islam dan Peradaban Umat

Bidang Politik Sosial Ekonomi Pendidikan dan Teknologi

Editor :
Dr Moordiningsih, M.Si, Psi
Gatiningsih, SIP
Maria Husnun Nisa, S,Sos., M.A.
Ken Retno Yuniwati, SIP.
Esti Handayani, A.Md.

Penerbit :
Universitas Muhammadiyah Surakarta
Jl. A Yani Tromol Pos I Pabelan Surakarta 57102
2013

x + 928 hlmn
ISBN : 978-602-19931-1-8

Falls Clinic : Falls Prevention Policy for Older People in Indonesia

Yulisna Mutia Sari, SSt.FT., MSc(GRS)[1] dan Ass. Prof. Victoria Traynor[2]
Prodi Fisioterapi Universitas Muhammadiyah Surakarta
Jl. A. Yani Tromol Pos I, Pabelan, Kartasura, Surakarta[1]
University of Wollongong
Northfields Ave, Wollongong, NSW, 2522 Australia[2]
Yulisna.Mutia@ums.ac.id

Abstract. Sebagai pengguna dewasa utama perawatan kesehatan, lansia memiliki kepentingan layanan sosial dan pengembangan kebijakan kesehatan. Pencegahan jatuh untuk lansia merupakan tantangan kesehatan masyarakat yang mendesak karena peningkatan jumlah insiden jatuh dan beban kesehatan dalam masyarakat terkait dengan jatuh. Di Indonesia, hal ini menjadi perhatian penting bagi pasien, keluarga dan praktisi kesehatan karena saat ini Indonesia tidak memiliki pedoman nasional pada program pencegahan jatuh. Tujuan dari paper ini adalah untuk mengembangkan kebijakan baru dalam pencegahan jatuh pada lansia berupa klinik khusus jatuh di Indonesia untuk mendukung kinerja dan kemampuan lansia dalam komunitas.

A. Introduction

As the main adult users of health care, older people have a key interest of social care services and health policy development. According to London Departement of Health (2004), health policy gives content and consistency to healthcare delivery and has two principle goals which are “to add years to life” and “add life to years”. There is many concerns of health care practitioners and goverment in order to enhance quality of life of elderly community, one of those policies is preventing of falls. Falls prevention among older people is an urgent public health challenge because of the increasing amount of falls incident and health burden within the community associated with falls. In Indonesia, it is becoming a significant concern for patients, families and health care practitioners because currently Indonesia does not has national guidance on falls prevention program for physiotherapy clinics. As practitioners, physiotherapists as well as nurses are well placed to asses older people either who have high risk of falls or have fallen to prevent future falls.

In Australia and other advanced countries, fall prevention activities has been considered as a important element of the health policy agenda. The prominent driver of fall prevention policy has been recognized as health care financial burden associated with fall injuries (Clemson et al. 2010). Eventhough the goverment as the key apect of fall management policy generally to varying degrees of support at service, leadership, and organizational level, health profesionals also play a important role. The national guidelines for prevention of falls clearly place doctors, nurses, physiotherapists, occupational therapists and health professionals at the forefront of delivery intervention (Clemson et al. 2010). Particularly in Indonesia, this country has no national guidelines on falls prevention. As the population of elderly, with increasing longevity, it lead to the incidence of fall that will continue to rise. It is necesary for Indonesian physiotherapists to have national evidence- based guidelines to predict whether some individuals are at risk of falls, assess the risk factors and prevent the incidence of falls. These would help physiotherapist and all members of health care practinioners in assessment and treatment of the the older people’s abilities to full potential. The purpose of this paper is to develop a new

policy in falls prevention for Indonesian out-patient clinic to support meaningfully the performance and ability of older people in their community.

B. Literature Review

In order to gain deep understanding regarding the contents of the policy in falls prevention of older people in outpatient clinics in Indonesia (Appendix 1), relevant evidence was searched and selected from Cochrane Database of Systematic Reviews, CINAHL full text database, PubMed database, summon of University of Wollongong library, and goegle scholar. In addition, snowball technique was also used to retrieve the litterature and shopisticated sources.

WHO (2008) commonly defined falls as "inadvertently coming to rest on the ground, floor or other lower level, excluding intentional change in position to rest in furniture, wall or other objects". The increasing incident of falls is related to age and the level of frailty. Internationally, approximately 30% of people 65 years of age and over fall each year and lead to death and significant injury as well as an increased levels of anxiety and social withdrawal in those who experience falls (Gillespie, 2009). Maclntosh & Joy (2007) describe that a fall can lead to the bad effect for older people and anxiety when mobilising and falling again, in different point, it can result in staff feeling guilty and litigation by patient's family members.

According to National Institute for Health and Clinical Excellence (2004), falls prevention interventions aim to address risk factors for falling and may do this through primary prevention which could include a review of medication, the introduction of an exercise programme to improve balance, or environmental modifications made to remove trip hazards; or secondary prevention (interventions aimed at people with a history of falling), which may focus more specifically on the risk factors that might have contributed to the person's previous falls.

Gillespie et al. (2010) conducted a systematic review study in The Cochrane collaboration library to assess the effectiveness of falls prevention which the primary outcome were rate of falls and risk of falling. This study included 111 randomised control trials with a total of 55, 303 participants in elderly people dwelling in the community. The researchers divided the intervention into grouped type of single intervention which are exercise, medication (drug target), surgery, fluid or nutrition therapy, psychological, environment (assistive technology) and knowledge (education intervention) as well as multiple intervention. This systematic review reported that exercise programmes such as exercising in supervised group, Tai Chi, individually prescribed multiple-component home-based exercise are effective in reducing rate of falls and risk of falling. Assessment and multifactorial intervention as well as some medicines (psychotropic medication) also reported can reduced rate of falls, but not risk of falling. Gillespie et al. also argue that Vitamin D and home safety interventions did not reduce the risk of falling, except in people who have low level vitamin D and with severe visual impairment. Pacemakers and first eye cataract surgery seem to be effective in reducing falls in people with frequent falls associated with carotid sinus hypersensitivity and having the operation on the first affected eye. In the context of out-patient clinic, particularly in physiotherapy rehabilitation care, psychotropic medication, pacemaker and catarac surgery can not be applied due to those treatment are not physiotherapists' competence. This research used systematic review as the collected data method and this method generally known as the superior method in

order to identify the large number of trials in this area and summarise the evidence for health care professionals, researchers, policy makers and others with an interest in this topic (Walter, 2011).

Australian Department of Health and Ageing (2009) developed a guideline of preventing falls and harm from falls in older people in the community. This guideline explains that engaging older people themselves is an integral part of preventing falls and minimizing harm from fall. The best practice in preventing falls in community includes implementing falls prevention strategies, identifying the risk of falls, and implementing individualised strategies that are resourced adequately and monitored regularly. The falls prevention intervention including certain exercise programs, assessment followed by multifactorial treatment, home safety interventions in high-risk groups, and academic detailing for general practitioners by a pharmacist. Falls risk screning and falls risk assessment are also the importance strategies to identify the risk factor of falls and suitable prevention intervention for individual.

There is some evidences about assessment tool to identify the risk of falling. Whitney et al. (2005) demonstrate a quantitative study about streamlining of Timed up and Go Test and detailed assessment for identifying falls risk factor of older people. The researchers also found that Timed Up and Go Test are significant to predict Physiological Profile Assessment (PPA) which statistical result for probability value was <0.001 and indicated that the optimal cut point to identify those with a fall high risk was 15 seconds in the Timed Up and Go Test. Evidence about falls risk assessment tools also support by Forrest et al. (2012) in which they conducted a qualitative study based on retrospective survey about relationship between falls risk assessment (Functional Independence Measure) to the likelihood of patient will fall. The researchers suggest that the rate of falls can be consider by the assessment screening tools to determine the risk factor rate in each elderly patient. In contrast, a systematic review of risk factors and risk assessment tools by Oliver et al. (2004) identified 47 papers that mentioned falls risk assessment tools. However, only two assessment tools fulfilled the criteria of prospective validation with specificity and sensitivity, these were the Morse and the STRATIFY tools. Oliver argue that many others had obscure derivation and arbitrary scoring, and that there was little basis for using such tools in clinical practice.

For out-patient clinic, falls clinics as a part of outpatient service are conducted by a multidisciplinary team with skills in falls assessment and management for people who have fallen. The team develops an intervention strategy for the older person, as well as advice, education and training for the older person, their carer and other members of the health care team (Hill, 2008, Department of Health and Ageing, 2009). A longitudinal quantitative study has been conducted by Hill (2008) in Victoria to investigate the effectiveness of falls clinic outcome and client adherence to recommended interventions. The most commonly recommended interventions were home visits to determine the need for home modifications (50%), home exercise programs (47%), day hospital or community therapy service (41%), home aids or modifications organized (34%), further medical investigations or medical management of disorder (30%), group exercise (25%), gait aid change (25%), footwear change (19%), footcare (17%), hip protectors (17%), vision assessment or management (16%), medication reduction (16%), and behavior modification or reduction of risky behaviours (15%). A range of other interventions was also recommended, although each of these occurred in less than 10% of clients.

Physical activity or exercise may play a primary, secondary and tertiary role to prevent falls. Some evidences suggested that factors of physical risk associated with falls should be included in exercise programs in order to reducing falls at all risk levels. There is also important to consider the type and intensity of exercise that matches with capabilities of elderly people (Iinattiniemi et al. 2008, Rose & Hernandez, 2010). Evidence also suggests that staff education is one of the most important factors in the success of a falls programmes (Gillespie et al. 2009, Cameron et al. 2010).

C. Discussion

1. Consultation with consumers and colleagues

It can be noted that the studies which presented in the literature review focus on preventing falls in the hospital and community. For developing the new policy in out-patient clinic, analysis and evaluation are extremely needed to evaluate and adopt esssential and appropriate falls prevention and best practice to be applied in out-patient clinic. Consultation with consumers and carers will be done in order to develop this new policy. In particular, participation of the older person in their own health care is central to high-quality and accountable health services. Find out what changes an older person is willing to make to prevent falls is needed, therefore appropriate and acceptable recommendations can be made. The older person can help facilitate change in health care practices and support the implementation of clinical-based practice. The consultation process involved a survey with questionnaire to older people, family members and carers, multiple nationwide workshops to engage colleagues and Indonesian Physiotherapists Association, teleconferences and target interviews with key stakeholders. It is also necessary to provide relevant and user-friendly information such as flyer and brochure to inform the new policy and provide suggestion box to allow older people and their carers to take part in discussions and decisions about preventing falls. Ask the older person's family to help in falls prevention strategies can be a strategy as an activity to encourage shared responsibility in health care.

2. Implementation in practice

The next step after researching evidence based literature or relevant research that has been evaluated in aplication is the implementation of the research findings to the new policy. Crookes & Davies (2004) argue that the importance thing for any would-be innovator to feel that they can make a difference and present the strategies of change which are power-coercive approach, rational-empirical approach, and the normative re-educative approach. In order to implement the new policy, consultation with colleagues is needed to invite others to be in the some board. The strategy will be conducted with getting the Director and collegues and telling them the idea and the needs to change. Asking permission from the director of clinic is also done to held meeting and involving resident committee to discuss the evidence before develop the policy draft for fall prevention in out patient clinic. The meeting will be held as the morning-tea meeting or policy lounge to invite other people interest participating in this meeting. The other things are involving Indonesian Physiotherapist Association to support this project and review the relevant and appropriate research findings and best practice to be implemented. However, while there is some barriers in application of reserch findings in practice, practitioners have a right to look the researchers to disseminate the results of their work effectively (Crookes & Davies, 2004). This development of the preventing falls policy in out-patient clinic will consider the real situation and the research findings in order to receive appropriate approach of implementation. Therefore, after developing the policy draft, it is necessary to endorse the draft with expert and colleagues panel before

implementing the policy in the next meeting (second meeting). Evaluation will be done in order to gain best practice and implementation. Flyer and education brochure to inform the new policy to consumers and collegues are also undartaken since this information is very useful in engaging other people to aware and giving respond or feedback on this new policy. In the implementing the new policy, staff education or training is becoming the important manner in order to gain the succesfull implementation in practice.

3. Measuring successful implementation of the new policy.

In order to measure of successful implementation of the new policy, a survey will be undertaken to the elderly patients in out-patient clinic. A questionnaire will be given to the older people in order to know how many older people aware with this new policy and the contribution for their health and quality of life. This questionnaire also will be given to elderly people's family members and carers about their awareness and their interest to this new policy. Interview also can be undertaken to staff in order to ask their comments and feedback regarding this policy. The survey will use the focus group approach to investigate the behaviour and deep understanding in some small population that are expected to be explored and in this case are elderly patients, family members and carers, amd staff of Physiotherapy Rehabilitation Clinic. A mini research also will be conducted to measure the risk of falls and the rate of falling of elderly people in before and after implementation in order to investigate the effectiveness the new policy in the out-patient clinic.

D. Conclusion and Suggestion

In conclusion, it can be argued that falls prevention policy in out-patient clinic is an important aspect for elderly cummunity's quality of life and well being. Although this evidence-based literature and study presented focus on falls prevention in hospital and community in Australia, the implementation and some aspects can be adopted for a new policy in physiotherapy rehabilitation clinic in Indonesia that has similar target which are elderly people. Some aspects that seem different are the health care practitioner participated and the way deliver the prevention treatment. As already known that elderly people stay longer in hospital than those in the physiotherapy rehabilitation centre. In the future, perhaps this policy can be multidisciplinary to gain integrated treatment and holistic approach in supporting performance and ability of elderly people. Best practice in implementing this policy also should be resourched adequately, and monitored and reviewed regularly. Falls prevention interventions may need to be modified to make sure they are suitable for the individual. In addition, there is necessary for further research to establish the new other policy in order to enhance quality of live and wellbeing of elderly patients in out-patient clinic. The policy that seems to be important next is management of pain for elderly patient in out-patient clinic.

APPENDIX

Name of document	Fall Prevention Interventions for Older Patients in Physiotherapy Rehabilitation Centre, Indonesia.
Type of Document	Policy Document
Document Number	-
Version Number	-
Document applicable to	All service users and all staff groups
Name and title of originator/author	Yulisna Mutia Sari, Falls Project Worker
Name and title of Executive Director lead(s)	-
Name of responsible Committee(s)	Falls Clinic Group Clinical Patient Safety Group Health & Safety Central Committee
Ratified By	Chair of Community Rehabilitation Healthcare Services Committee
Date issued for publication	-
Review date	-
Expiry date : (9 month after review date)	-
Key Terms	Falls, Prevention, Elderly patients, Falls risk screen/assessment, Intervention.
Summary	The purpose of this document is to outline the process for the prevention interventions of falls in older people aged 65 years and over presenting to Physiotherapy Rehabilitation Centre of Surakarta and facilities. The Policy aims to improve standardise of falls prevention intervention in out-patient clinic in order to reduce the incidence and severity of falls among older people and social, psychological and economic impact of falls on individuals, families and the community.

Fall Prevention Interventions for Older Patients in Physiotherapy Rehabilitation Center of Surakarta, Indonesia.

1. Background

Approximately 30% of people over 65 years of age living in the community fall each year (Gillespie et al. 2010). The health burden within the community associated with falls is also enormous and falls can lead to death and significant injury as well as an increased levels of anxiety in those who experience falls (WHO, 2008).

2. Policy Statements

- All patients aged 65 years and over in Physiotherapy Rehabilitation Centre of Surakarta will receive a fall risk assessment as part of the full admission assessment. The admitting physiotherapist is responsible for this assessment. The assessment is to be completed as part of the full admission assessment as soon as the patient arrives to rehabilitation treatment room.
- Falls Clinic as a part of Physiotherapy Rehabilitation Centre of Surakarta's services will be held twice a week. All patients aged 65 years and over who attend falls clinic and not admitted will be screened for falls risk. This falls risk screen will be followed by recommended and suitable falls intervention strategies.
- The risk assessment including falls history identification, balance, mobility and gait assessment, muscle weakness, osteoporosis assessment, visual impairment, assessment of cognitive impairment and neurological examination, cardiovascular examination and environment assessment.
- All identified falls risks must be documented properly within health care record.
- The high-risk patients will be informed that they are at risk of having falls and conversation with their main carer or person responsible also warranted.
- The high-risk elderly patients will be recommended to participate in the group exercise program which are include strength and balance training, Thai Chi and individually prescribed exercise programmes at home.
- Falls clinic of Physiotherapy Rehabilitation Centre of Surakarta provide supervision team to asses elderly patient's house and environment in order to give recommended modification of their environment to prevent the falls.
- Provide older people and their families and carers with information about action they can take to reduce the risk of falls and injury from falls.
- Providing staff education and updating knowledge for health care practitioners.
- Support the conduct and dissemination of research to advance falls prevention policy and practice.

3. Responsibilities

All physiotherapists and support service staff are responsible for implementing targeted intervention strategies to minimise falls risk for individual patients.

References (Policy Document)

Department of Health and Ageing 2009, *Guidebook for Preventing Falls and Harm From Falls in Older People: Australian Community Care*, Australia, accessed 23 April 2012, http://www.health.gov.au/internet/main/Publishing.nsf/Content/404Ref.htm

Gillespie, LD, Robertson, MC, Gillespie,WJ, Lamb, SE, Gates, S, Cumming, RG & Rowe, BH 2009, 'Interventions for preventing falls in older people living in the community', *Cochrane database of systematic reviews (Online),* vol. 15 no. 2, pp. CD007146

New South Wales Government 2011, *Falls - Prevention of Falls and Harm from Falls among Older People: 2011-2015*, Australia, accessed 2 April 2012, http://www.health.nsw.gov.au/policies/pd/2011/PD2011_029.html

Reference Lists

Cameron, ID, Murray, GR, Gillespie, LD, Robertson, MC, Hill, KD, Cumming, RG, Kerse, N (2010), 'Interventions for preventing falls in older people in nursing care fascilities and hospitals', *Chocrane Database of Systematic Review*, vol. 20, no. 1, pp. CD005465

Clemson, L, Finch, CF, Hill, KD & Lewin, G (2010), 'Fall Prevention in Australia: Policies and Activities', *Clinics in Geriatric Medicine,* vol. 26, no. 4, pp. 733-749.

Crookes, P & Davies, S (2004), *Research into practice: essential skills for reading and applying research in nursing and health care,* Bailliè e Tindall, Edinburgh.

Department of Health (2004), *Securing Good Health for the Whole Population. Wanless Report (Final)*, HM Treasury, London, accessed 14 April 2012, tinyurl.com/wanless-health

Department of Health and Ageing (2009), *Guidebook for Preventing Falls and Harm From Falls in Older People: Australian Community Care*, Australia, accessed 23 April 2012, http://www.health.gov.au/internet/main/Publishing.nsf/Content/404Ref.htm

Forrest, G, Huss, S, Patel, V, Jeffries, J, Myers, D, Barber, C & Kosier, M (2012), 'Falls on an inpatient rehabilitation unit: risk assessment and prevention', *Rehabilitation Nursing : the official journal of the Association of Rehabilitation Nurses,* vol. 37, no. 2, pp. 56.

Gillespie, LD, Robertson, MC, Gillespie, WJ, Lamb, SE, Gates, S, Cumming, RG & Rowe, BH (2009), 'Interventions for preventing falls in older people living in the community', *Cochrane Database of Systematic Reviews (Online),* vol. 15, no. 2, pp. CD007146.

Hill K, Moore K, Dorevitch M and Day L (2008), 'Effectiveness of falls clinics: an evaluation of outcomes and client adherence to recommended interventions', *Journal of the American Geriatrics Society,* vol. 56, no. 4, pp. 600–608.

Iinattiniemi, S, Jokelainen, J & Luukinen, H (2008), 'Exercise and risk of injurious fall in home-dwelling elderly', *International Journal of Circumpolar Health,* vol. 67, no. 2-3, pp. 235-244

MacIntosh, G & Joy, J (2007), 'Assessing falls in older people', *Nursing older people,* vol. 19, no. 7, pp. 33-37

National Institute for Health and Clinical Excellence (2004), *Falls: The Assessment and Prevention of Falls in Older People*, NICE, London, accessed 14 May 2012, www.nice.org.uk/CG21

Oliver, D (2004), 'Risk factors and risk assessment tools for falls in hospital in-patients: a systematic review', *Age and Ageing*, vol. 33, no. 2, pp. 122-130

Oliver, D, Healey, F & Haines, TP (2010), 'Preventing Falls and Fall-Related Injuries in Hospitals', *Clinics in Geriatric Medicine,* vol. 26, no. 4, pp. 645-692

Rose, DJ & Hernandez, D (2010), 'The Role of Exercise in Fall Prevention for Older Adults', *Clinics in Geriatric Medicine,* vol. 26, no. 4, pp. 607-631.

Walter, M (2011), *Social research methods,* 2nd edition, Oxford University Press, South Melbourne, Vic

Whitney, JC, Lord, SR & Close, JCT (2005), 'Streamlining assessment and intervention in a falls clinic using the Timed Up and Go Test and Physiological Profile Assessments', *Age and Ageing,* vol. 34, no. 6, pp. 567-571.

World Health Organization (2008), *WHO global report on falls prevention in older age,* World Health Organization, Geneva, Switzerland.